



Midiverse Modular

MVM007 – Audio Mixer

Build Guide

Thanks for choosing this kit and supporting Midiverse Modular!

This guide provides basic instructions to build your MVM007 Audio Mixer module.

Module size: 6HP

Power consumption: draws 4 mA from the +12V rail and 4 mA from the -12V rail.

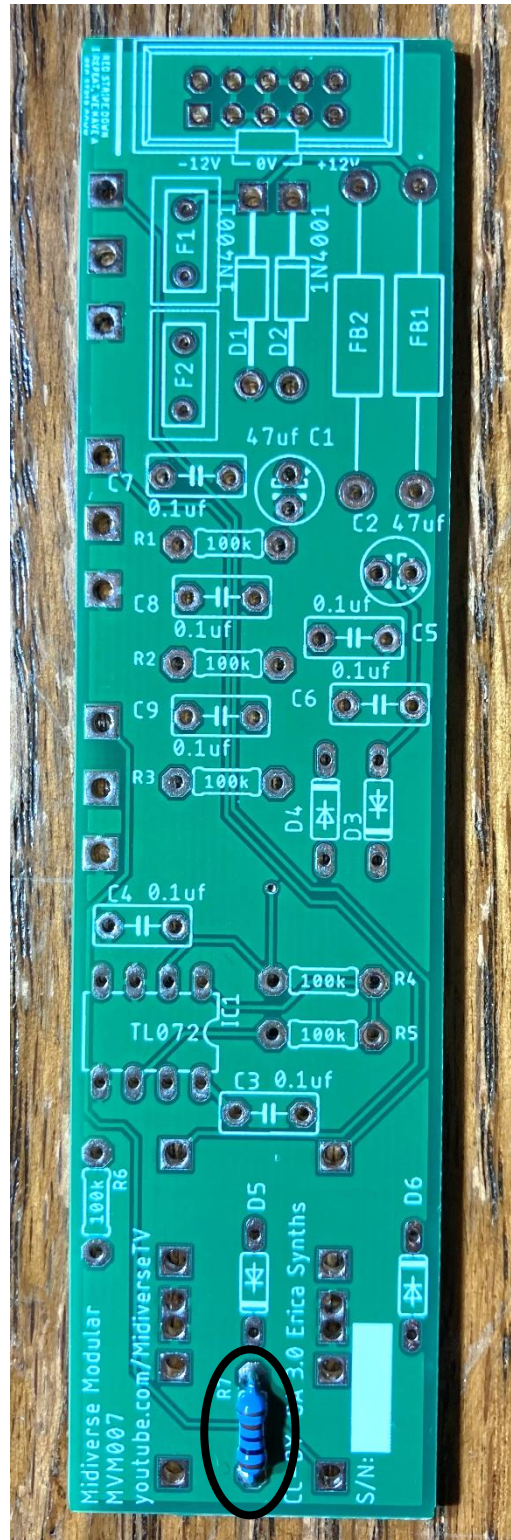
For this build, basic soldering equipment is required. This module is an intermediate build due to the close proximity of many parts.

This kit comes with the following parts:

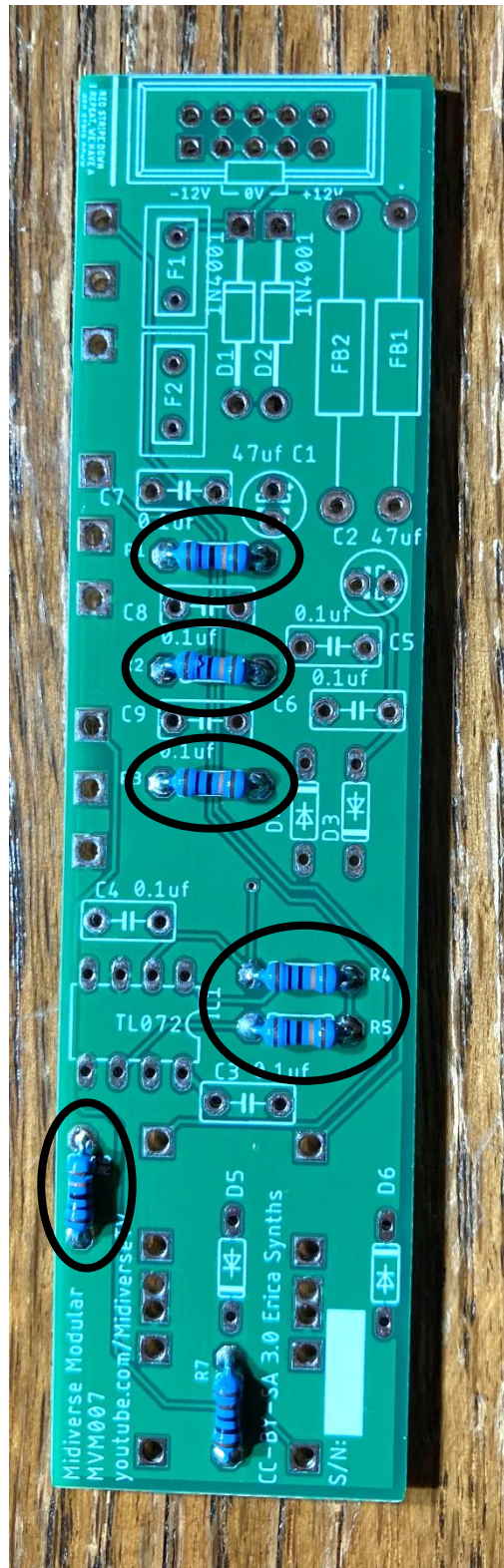
Reference	Qty	Value	Notes
Audio Mixer PCB	1		
Audio Mixer Panel	1		
R1, R2, R3, R4, R5, R6	6	100K	Orange, orange, black, brown, brown
R7	1	1K	Brown, black, black, brown, brown
D1, D2	2	1N4001	
D3, D4, D5, D6	4	1N4148	
FB1, FB2	2	Ferrite beads	
F1, F2	2	Fuses	
C1, C2	2	47uf	Electrolytic
C3, C4, C5, C6	4	0.1uf	Ceramic
C7, C8, C9	3	0.1uf	Film
IC1	1	TL072	
IC Socket	1	8 pin	
VR1, VR2, VR3	3	A100K Potentiometers	
J1, J2, J3, OUT	4	3.5mm Jacks	
J1	1	10 pin Power Connector	2x5 shrouded header
White Knobs	3		
Power Cable	1	10 pin – 16 pin	

Build Instructions:

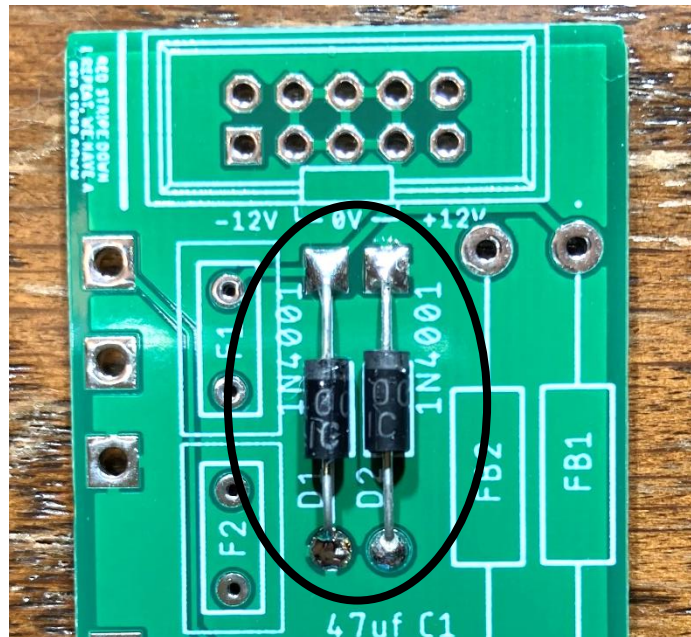
Start by populating and soldering the resistors. First, the 1K resistor.



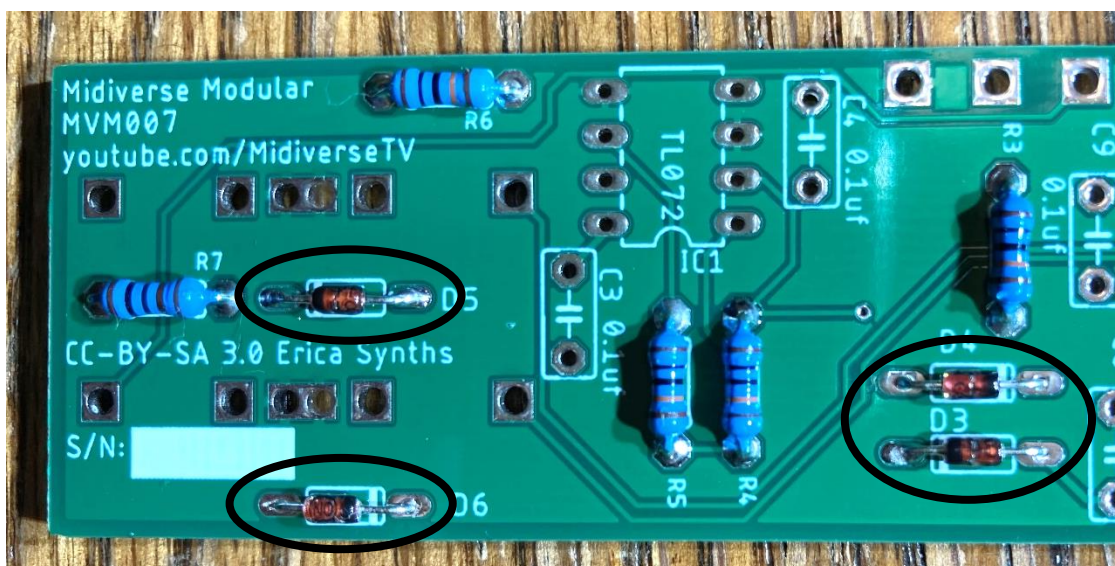
Then, the six 100K resistors.



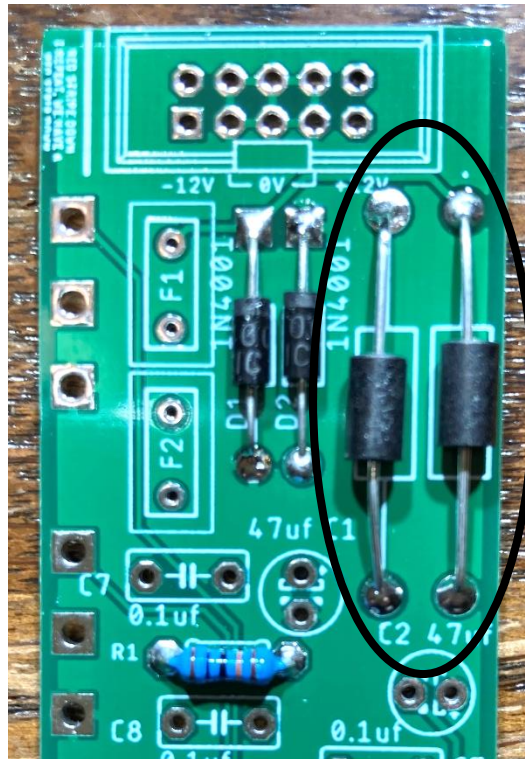
Next, populate and solder the diodes. Start with the two 1N4001 diodes. Be sure to pay attention to the orientation. The gray line on the diode should align with the white line on the PCB.



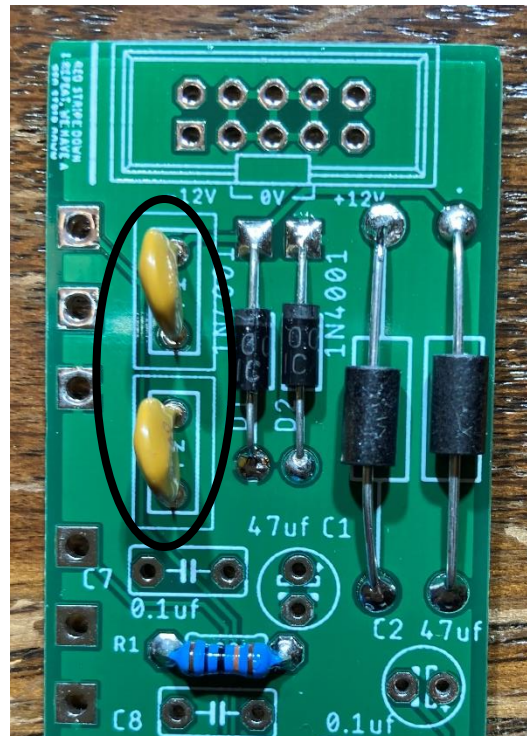
Then, the four 1N4148 diodes. Again, be sure to pay attention to the orientation. The black line on the diode should align with the white line on the PCB.



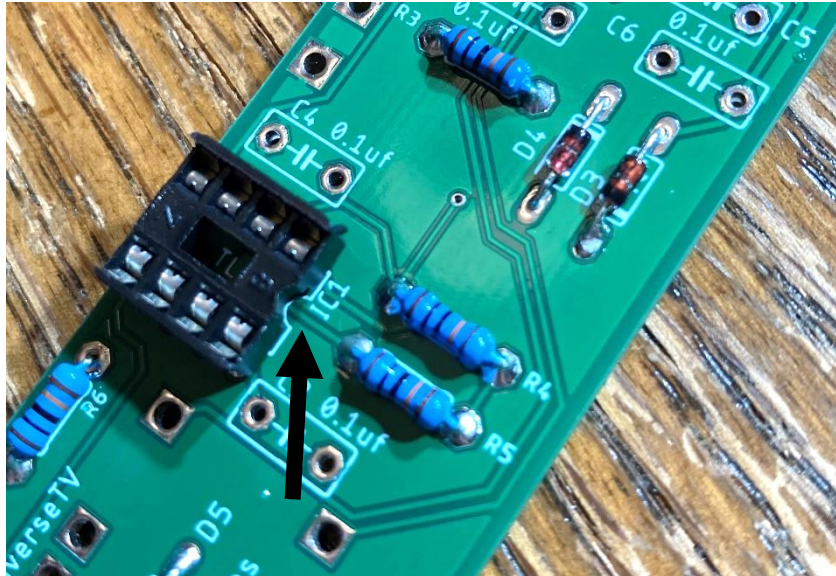
Populate and solder the ferrite beads.



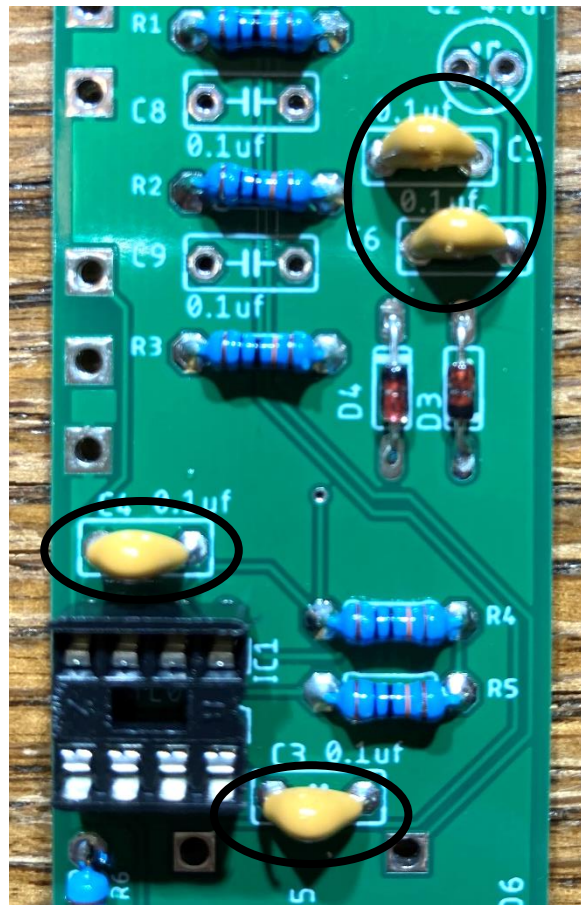
Next, the fuses.



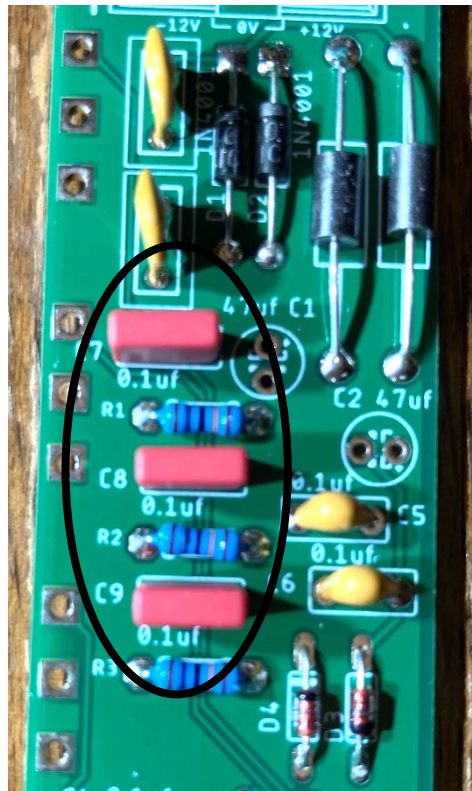
Populate and solder the 8-pin socket. Notice the orientation of the socket. The notch on the socket should align with the notch shown on the PCB (see arrow). The notch is towards the right in the photo.



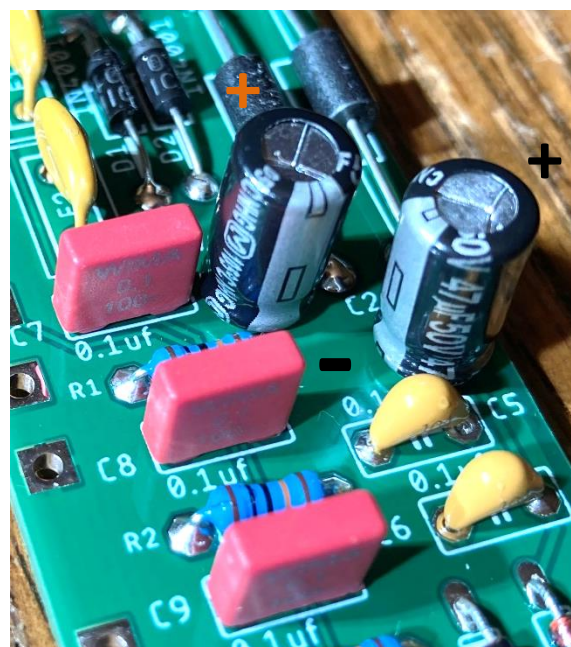
Next, populate and solder the capacitors. Start with the four 0.1uf ceramic capacitors.



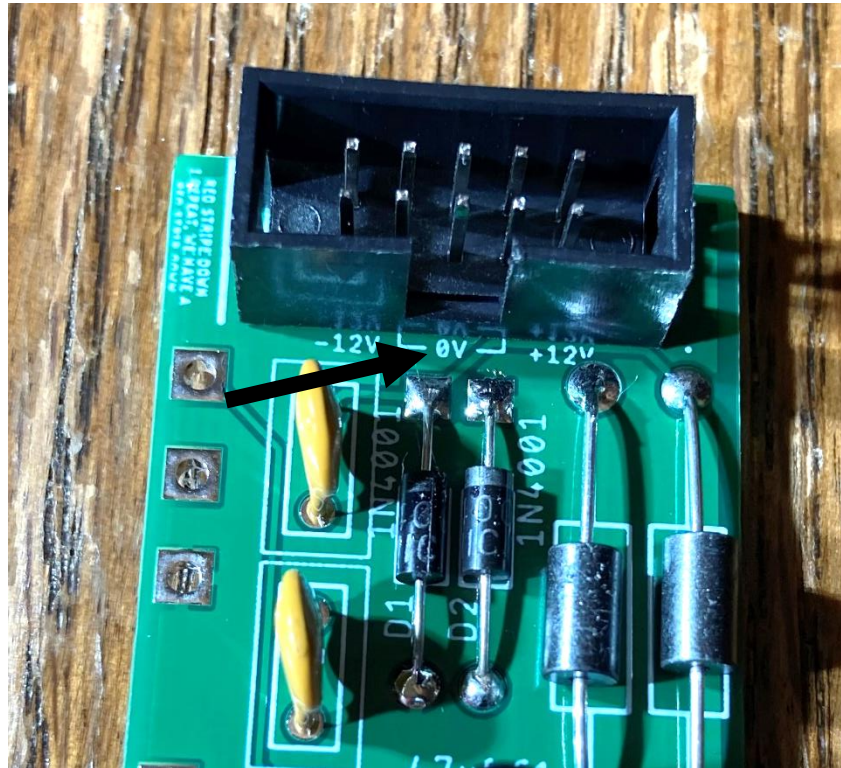
Next, the three 0.1uf film capacitors.



Then, the two 47uf electrolytic capacitors. Be sure to pay attention to the orientation. The long leg of the capacitor should go through the pad with the + sign. Make sure that the negative stripe on the capacitors aligns with the picture below.



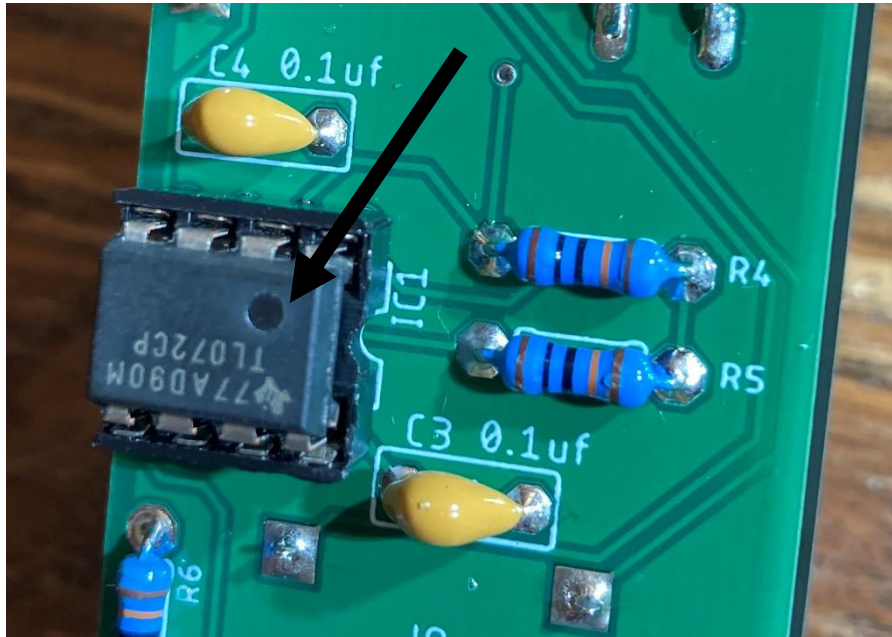
Solder in the 2 x 5 power connector. Be sure to pay attention to the orientation. The notch should be oriented away from the edge of the PCB, as shown in the picture below. **At this point, reflow all the solder joints and make sure that all connections are good.**



Populate the three potentiometers and the four jacks, but **DO NOT** solder yet. **Before soldering the components**, be sure to attach the front panel by hand tightening the nuts. This step is very important as it is difficult to align these components with the holes if the front panel is not attached. Once the panel is attached, flip the module over and solder the components in place.



Populate the TL072 into the 8-pin socket. Orientation of the IC matters. Be sure to align the circle on the IC with the notch on the socket. See the photo below, the circle indicates pin 1 on the IC which is oriented towards the notch on the socket.



Tighten down the nuts on the jacks and potentiometers to secure the front panel. Finally, put the white knobs on the potentiometers. You can use the ridge of the potentiometer and the screw on the knob to assist with the alignment of the knob. You're finished!

